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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/882,169	06/15/2001	Robert Frederick Riemer	56230-530 (ANA-199)	9389

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12/02/2003

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EXAMINER

WANG, GEORGE Y

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 12/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/882,169

Examiner

George Y. Wang

Applicant(s)

RIEMER ET AL.

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazaki et al. (U.S. Patent No. 5,681,998, from hereinafter "Nakazaki") in view of McKenna (U.S. Patent No. 5,473,657).

3. Regarding claim 1, Nakazaki discloses a roller truck (fig. 6) having a spring plate (fig. 6, ref. 43) with top and bottom surfaces and unstrained edges, two axles (fig. 6, ref.

42) secured to the spring plate, and an attachment member (fig. 6, ref. 44) secured to the spring plate and is substantially parallel with each of the axles for securing the roller truck on one of a larger support frame (fig. 6, ref. 41). Nakazaki also discloses rollers (fig. 6) ref. mounted on each axle and a spring plate that is free to resiliently bend (col. 10 lines 1-5) about the attachment member.

However, the reference fails to specifically, disclose a roller truck for use in a CT scanner.

McKenna discloses a CT scanner with rollers (fig. 1, ref. 52, 60, 62) used for drum rotation having a single spring plate where the length of the plate is not greater than three times a smallest width of the plate (fig. 5, ref. 76), two axles (fig. 5, ref. 58, 60) that are secured to the side edges (fig. 5, ref. 69, 71) of the spring plate with the attachment member (fig. 5, ref. 80) secured to the same surface, and where the spring plate is substantially flat (fig. 5, ref. 76).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used Nakazaki's roller truck improvements on McKenna's CT scanner and rollers since one would be motivated to improve the rotation of the massive and heavy drum (col. 2, lines 62-65). Not only would compliant rollers facilitate rotation of the drum within the gantry, the rollers would provide "centerless" rotation within the frame while maintaining and improving the precision of the system for more accurate scans during drum rotation regardless of thermal expansion (col. 3, lines 1-9). The specifics of McKenna's roller that include a single spring plate where the length of the plate is not greater than three times a smallest width of the plate (fig. 5, ref. 76), two

axles (fig.5, ref. 58, 60) that are secured to the side edges (fig. 5, ref. 69, 71) of the spring plate with the attachment member (fig. 5, ref. 80) secured to the same surface, and where the spring plate is substantially flat (fig. 5, ref. 76) would be retained since these specifics maintain a resilient roller that effectively dampen vibration transfer between the frame and drum (abstract) to accommodate temperature cycling of the drum (col. 3, lines 28-31).

4. As to claim 2, Nakazaki discloses a roller truck where the attachment member is secured to the bottom surface (fig. 6, 44) of the spring plate.

5. As per claim 3, Nakazaki discloses a roller truck where the axles are secured to the bottom surface (fig. 6, 42) of the spring plate.

6. Regarding claim 4-6, Nakazaki discloses a roller truck where the axles are secured to the plate adjacent to the opposing ends of the spring plate, equally spaced from each other and from the attachment member (fig. 6).

7. As to claim 7, Nakazaki discloses a roller truck as recited above, however, the reference fails to specifically disclose a gantry of a CT scanner that rotates about a longitudinal axis of the attachment member.

McKenna discloses a CT scanner with rollers (fig. 1, ref. 52, 60, 62) used for drum rotation about a longitudinal axis of the attachment member (fig. 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used Nakazaki's roller truck in McKenna's CT scanner since one would be motivated to improve the rotation of the massive and heavy drum (col. 2, lines 62-65). Not only would compliant rollers facilitate rotation of the drum within the gantry, the rollers would provide "centerless" rotation within the frame while maintaining and improving the precision of the system for more accurate scans during drum rotation regardless of thermal expansion (col. 3, lines 1-9).

8. Regarding claim 8-10, Nakazaki discloses a roller truck where the attachment member is tubular (fig. 6, ref. 44), the spring plate is substantially flat (fig. 12, ref. 76), and resilient tires are received on each roller (col. 2, lines 19-25).

9. Regarding claim 11, Nakazaki discloses a roller truck with an attachment member secure (fig. 6, ref. 44) to a frame (fig. 6, ref. 46) as recited above, however, the reference fails to specifically disclose a gantry of a CT scanner with a support frame, an annular drum mounted for rotation, an annular disk extending radially inwardly from the drum, and where the attachment member is secured to the support frame and the rollers of the truck bearing the surfaces of the annular drum for rotation of the drum with respect to the support frame.

McKenna discloses a gantry (fig. 1, ref. 20) of a CT scanner with rollers (fig. 1, ref. 52, 60, 62) used for drum rotation having a support frame (fig. 1, ref. 22), an annular drum (fig. 1, ref. 24), an annular disk (col. 4, lines 22-26), and where rollers (fig. 1, ref.

60, 62) having bearing of the surface of the drum and the attachment member (fig. 2, ref. 80) is secured to the support frame.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used Nakazaki's roller truck in McKenna's CT scanner since one would be motivated to improve the rotation of the massive and heavy drum (col. 2, lines 62-65). Not only would compliant rollers facilitate rotation of the drum within the gantry, the rollers would provide "centerless" rotation within the frame while maintaining and improving the precision of the system for more accurate scans during drum rotation regardless of thermal expansion (col. 3, lines 1-9).

10. Regarding claims 12-20, Nakazaki discloses a roller truck with a spring plate that is substantially flat (fig. 12, ref. 76) and resilient tires (col. 2, lines 19-25) as recited above, however, the reference fails to specifically teach gantry rotation that pivots along the longitudinal axis of the attachment member, an annular support frame with a drum that is coaxially received within the frame, a circumferential bearing surface of the drum facing outwardly and the roller truck position between the drum and the support, a space provided between the drum and support for thermal expansion, two roller trucks situated at an equal distance from the vertical center line of the drum, a motor for connected to the rollers for drum rotation, and further having x-ray tomography components operatively mounted on the annular disk.

McKenna discloses a gantry (fig. 1, ref. 20) of a CT scanner with rollers (fig. 1, ref. 52, 60, 62) used for drum rotation having a support frame (fig. 1, ref. 22), an annular

drum (fig. 1, ref. 24), an annular disk (col. 4, lines 22-26), and where rollers (fig. 1, ref. 60, 62) having bearing of the surface of the drum and the attachment member (fig. 2, ref. 80) is secured to the support frame and further having gantry rotation that pivots along the longitudinal axis (fig. 1) of the attachment member, an annular support frame with a drum that is coaxially received within the frame (fig. 1), a circumferential bearing surface (fig. 1, ref. 28) of the drum facing outwardly and the roller truck position between the drum and the support, a space (fig. 1, ref. 54) provided between the drum and support for thermal expansion, two roller trucks (fig. 1, ref. 52) situated at an equal distance from the vertical center (fig. 1, ref. 56) line of the drum, a motor for connected to the rollers for drum rotation, and further having x-ray tomography components (fig. 1, ref. 34, 36) operatively mounted on the annular disk (col. 4, lines 22-26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used Nakazaki's roller truck in McKenna's CT scanner since one would be motivated to improve the rotation of the massive and heavy drum (col. 2, lines 62-65). Not only would compliant rollers facilitate rotation of the drum within the gantry, the rollers would provide "centerless" rotation within the frame while maintaining and improving the precision of the system for more accurate scans during drum rotation regardless of thermal expansion (col. 3, lines 1-9).

Response to Arguments

11. Applicant's arguments filed 21 August 2003 have been fully considered but they are not persuasive.

Applicant's main argument is that "neither Nakazaki nor the combination of Nakazaki and McKenna teaches or suggests a roller truck having a single pring plate, which has a length not greater than three times a smallest width of the plate, and two side edges of the spring plate being secured to the axles near the ends of the axles" as claimed by newly amended Claim 1. Examiner, however, notes that the McKenna reference discloses all these limitations and provides sufficient motivation for combination (see Rejection above).

Therefore, Examiner holds to the validity of the reference used and maintains rejection.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

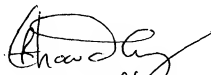
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Y. Wang whose telephone number is 703-305-7242. The examiner can normally be reached on M-F, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

gw
November 18, 2003


T. Chowdhury
Primary Examiner